Source Water Assessment Report

Public Water Supply: FARMLAND NATIONAL BEEF − LIBERAL

Assessment Areas Include:
784, 785

Kansas Department of Health and Environment
Bureau of Water Watershed Management Section
1000 SW Jackson St., Suite 420
Topeka, KS 66612−1367

Burns &McDonnell
9400 Ward Parkway
Kansas City, MO 64114

Kansas Geological Survey University of Kansas
1930 Constant Ave.
Lawrence, KS 66047

Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

Table Of Contents

Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two−mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream−drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet−based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(http://www.kdhe.state.ks.us/nps) in 2004.

FARMLAND NATIONAL BEEF − LIBERAL Summary:

AA	Type	Diversion Id
784	Ground water multiple wells	002, 003, 005, 06, 06
785	Ground water multiple wells	004, 007, 07

Public Water Supply:	**FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area:	**784**
Diversion Id's:	**002, 003, 005, 06, 06**
Status:	**Accepted**
Submit Date:	**2003−08−22 16:08:54**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication − phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi−quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score − SLS	50	56	48	56	51	59
SLS Range	Low	Mid	Low	Mid	Low	Mid

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0−50	Low Susceptibility
51−80	Moderate Susceptibility
81−100	High Susceptibility

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a100−foot radius around a groundwater well and a 1000−foot radius around a surface water intake. Zone B is a 2000−foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2−mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
219891	Oil and Gas Field services	1389	B
220629	Oil and Gas Field services	1389	B
220939	Oil and Gas Field services	1389	B
220620	Single−family Housing Construction	1521	B
220260	Meat Packing Plant Manufacturing	2011	B
220236	General Farm, Primarily Crop	191	C
220162	Veterinary Services, Specialties	742	C
220777	Veterinary Services, Specialties	742	C
220778	Veterinary Services, Specialties	742	C
220605	Animal Specialty Services	752	C
220734	Animal Specialty Services	752	C
220627	Drilling Oil and Gas Wells	1381	C
219877	Oil and Gas Field services	1389	C
219903	Oil and Gas Field services	1389	C
219904	Oil and Gas Field services	1389	C
219908	Oil and Gas Field services	1389	C
219909	Oil and Gas Field services	1389	C
220054	Oil and Gas Field services	1389	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
220061	Oil and Gas Field services	1389	C
220111	Oil and Gas Field services	1389	C
220115	Oil and Gas Field services	1389	C
220520	Oil and Gas Field services	1389	C
220586	Oil and Gas Field services	1389	C
220587	Oil and Gas Field services	1389	C
220600	Oil and Gas Field services	1389	C
220625	Oil and Gas Field services	1389	C
220632	Oil and Gas Field services	1389	C
220651	Oil and Gas Field services	1389	C
220669	Oil and Gas Field services	1389	C
220670	Oil and Gas Field services	1389	C
220728	Oil and Gas Field services	1389	C
220741	Oil and Gas Field services	1389	C
220748	Oil and Gas Field services	1389	C
220781	Oil and Gas Field services	1389	C
220805	Oil and Gas Field services	1389	C
220926	Oil and Gas Field services	1389	C
220937	Oil and Gas Field services	1389	C
220946	Oil and Gas Field services	1389	C
220951	Oil and Gas Field services	1389	C
220024	Single−family Housing Construction	1521	C
220064	Single−family Housing Construction	1521	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
220083	Single−family Housing Construction	1521	C
220268	Single−family Housing Construction	1521	C
220606	Single−family Housing Construction	1521	C
220686	Single−family Housing Construction	1521	C
220688	Single−family Housing Construction	1521	C
220873	Single−family Housing Construction	1521	C
220289	Nonresidential Construction	1542	C
220405	Nonresidential Construction	1542	C
220551	Nonresidential Construction	1542	C
220650	Nonresidential Construction	1542	C
220874	Nonresidential Construction	1542	C
220806	Prefabricated Wood Buildings Manufacturing	2452	C
220300	Newspapers Publishing and Printing	2711	C
220556	Newspapers Publishing and Printing	2711	C
220576	Newspapers Publishing and Printing	2711	C
220323	Commercial Printing−Lithographic	2752	C
220358	Gaskets, packing and sealing devices Manufacturing	3053	C
220049	Machinery, Except Electrical Manufacturing	3599	C
220608	Machinery, Except Electrical Manufacturing	3599	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
220800	Machinery, Except Electrical Manufacturing	3599	C
220729	Engine Electrical Equipment Manufacturing	3694	C
220076	Travel trailers and Campers Manufacturing	3792	C
220609	Signs and Advertising Display Manufacturing	3993	C
220488	Farm Product Warehousing and Storage	4221	C
220928	Refuse Systems	4953	C
220919	Farm and Garden Machinery	5083	C
220527	Scrap and Waste Materials	5093	C
220344	Gasoline Service Station	5541	C
220529	Gasoline Service Station	5541	C
220682	Gasoline Service Station	5541	C
220747	Gasoline Service Station	5541	C
220787	Gasoline Service Station	5541	C
220799	Gasoline Service Station	5541	C
220706	Mobile Home Park	6515	C
220375	Photofinishing Laboratory	7384	C
220544	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220550	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
220591	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220636	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220657	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220739	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220809	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
220022	Auto Truck Repair Service	7538	C
220195	Auto Truck Repair Service	7538	C
220357	Auto Truck Repair Service	7538	C
220524	Auto Truck Repair Service	7538	C
220553	Auto Truck Repair Service	7538	C
220610	Auto Truck Repair Service	7538	C
220615	Auto Truck Repair Service	7538	C
220638	Auto Truck Repair Service	7538	C
220696	Auto Truck Repair Service	7538	C
220717	Auto Truck Repair Service	7538	C
220783	Auto Truck Repair Service	7538	C
220917	Auto Truck Repair Service	7538	C
220923	Auto Truck Repair Service	7538	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
220938	Auto Truck Repair Service	7538	C
220718	Car Wash	7542	C
220025	Repair Services, Nec	7699	C
220028	Repair Services, Nec	7699	C
220889	Golf Course	7992	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000319	National Beef	03910	B
3000705	Convenience Plus #1	07001	C
3001134	Ray's Servco Service Center	17515	C

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001230	U−pump−it #300	22298	C
3002288	Convenience Plus #2	29499	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000111	WESKEM, LIBERAL	C108803007	B
7000107	8TH COUNTRY ESTATES (FMR NAT'L BEEF PACKING)	C108800207	C
7000108	COLLINGWOOD GRAIN − LIBERAL	C108800469	C
7000109	LIBERAL LANDFILL	C108803005	C
7000118	LIBERAL IRON METALS	C108870145	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000114	Seward County	0140−S	C
5000199	National Beef Packing Co.	0205−S	C
5000708	Seward County	0687−S	C
5000734	Seward County HHW	0715−S	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000621	NATIONAL BEEF PACKING − LIBERAL	I−CI10−NO06	B

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001172	LIBERAL	M−CI10−OO02	B
6001173	LIBERAL	M−CI10−OO02	B
6001176	LIBERAL	M−CI10−OO02	C

Public Water Supply:	**FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area:	**784**
Diversion Id's:	**002, 003, 005, 06, 06**
Status:	**Accepted**
Submit Date:	**2003−08−22 16:08:54**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number or sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
18	3	85	45	43	16

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **B*** − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
1381	Drilling Oil and Gas Wells	Oil, Salt Water	B
"	"	"	C
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
3053	Gaskets, packing and sealing devices Manufacturing	Inorganics, metals, VOCs	B
"	"	"	D
5541	Gasoline Service Station	Inorganics, VOCs	B
"	"	"	D
7992	Golf Course	Fertilizers and pesticides	A
"	"	"	B1
"	"	"	B2

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7992	Golf Course	Fertilizers and pesticides	B*
"	"	"	C*
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	A
"	"	"	B*
6515	Mobile Home Park	Sanitary wastes, Fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B*
1542	Nonresidential Construction	Sedimentation	B2
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
7384	Photofinishing Laboratory	NA	B
"	"	"	D
2452	Prefabricated Wood Buildings Manufacturing	TSS	B
"	"	"	D
5093	Scrap and Waste Materials	Metals, TSS	B
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	D
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
2752	Commercial Printing−Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2752	Commercial Printing−Lithographic	Inorganics, VOCs, Semi volatiles	D
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4953	Refuse Systems	ALL	D
7699	Repair Services, Nec	inorganics	B

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442
1381	Drilling Oil and Gas Wells	Oil, Salt Water	Drill water retention and treatment	KAR 28−41, 45, 40 CFR 435
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 469 and State or federal Storm water pollution prevention regulations
3053	Gaskets, packing and sealing devices Manufacturing	Inorganics, metals, VOCs	Pre−treat wastewater prior to discharge. Minimize outdoor storage and control storm water runoff.	State or federal Storm water pollution prevention regulations
5541	Gasoline Service Station	Inorganics, VOCs	Maintain area to minimize fuel contamination	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7992	Golf Course	Fertilizers and pesticides	Proper application of fertilizers and pesticides. Proper cleaning of equipment and disposal of chemicals.	KDHE, KAR 28−16
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	Wastewater pretreatment and/or discharge to a POTW	40CFR 432 and State or federal Storm water pollution prevention regulations
6515	Mobile Home Park	Sanitary wastes, Fertilizers	Discharge to POTW. Minimize use of lawn chemicals	KAR 28−5
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28−16, KDHE
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28−41, 45, 40 CFR 435

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7384	Photofinishing Laboratory	NA	Discharge to POTW. Recycle chemicals	CFR 40 459
2452	Prefabricated Wood Buildings Manufacturing	TSS	Discharge of process waters to POTW. Minimize outdoor storage.	State or federal Storm water pollution prevention regulations
5093	Scrap and Waste Materials	Metals, TSS	Minimize contact with storm water	State or federal Storm water pollution prevention regulations
3993	Signs and Advertising Display Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 459 and State or federal Storm water pollution prevention regulations
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28−48, KDHE, KDEM
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
2752	Commercial Printing−Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Ground Water Multiple Wells Analysis

A − Microbiolgical **B** − Inorganic Compounds
B* − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	Yes	0	0	0	0	0	0
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non−farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non−farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	No	0	0	0	0	0	0
16	Have all livestock producers implemented water quality protection measures?	Yes	0	0	0	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	No	0	0	0	0	0	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	No	0	0	0	0	0	0
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	Yes	1	1	1	1	1	1
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	No	0	0	0	0	0	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	No	0	0	0	0	0	0
39	Are watershed water quality protection plans in place?	Yes	0	0	0	0	0	0

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**
Diversion Id's: **002, 003, 005, 06, 06**
Status: **Accepted**
Submit Date: **2003−08−22 16:08:54**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **784**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication − phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi−quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score − SLS	50	56	48	56	51	59
SLS Range	Low	Mid	Low	Mid	Low	Mid

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0−50	Low Susceptibility
51−80	Moderate Susceptibility
81−100	High Susceptibility

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a100−foot radius around a groundwater well and a 1000−foot radius around a surface water intake. Zone B is a 2000−foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2−mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
219891	Oil and Gas Field services	1389	C
219909	Oil and Gas Field services	1389	C
220629	Oil and Gas Field services	1389	C
220939	Oil and Gas Field services	1389	C
220620	Single−family Housing Construction	1521	C
220969	Single−family Housing Construction	1521	C
220260	Meat Packing Plant Manufacturing	2011	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000319	National Beef	03910	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000107	8TH COUNTRY ESTATES (FMR NAT'L BEEF PACKING)	C108800207	C
7000109	LIBERAL LANDFILL	C108803005	C
7000111	WESKEM, LIBERAL	C108803007	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000114	Seward County	0140−S	B
5000199	National Beef Packing Co.	0205−S	B
5000708	Seward County	0687−S	B
5000734	Seward County HHW	0715−S	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000621	NATIONAL BEEF PACKING − LIBERAL	I−CI10−NO06	C
6001172	LIBERAL	M−CI10−OO02	C
6001173	LIBERAL	M−CI10−OO02	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001176	LIBERAL	M−CI10−OO02	C

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
Did Not Add Any Site Sources			

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number or sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
3	0	4	6	0	3

A − Microbiolgical
B* − Nitrates
C* − Pesticides
B − Inorganic Compounds
C − Synthetic Organic Compounds
D − Volatile Organic Compounds

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A − Microbiolgical **B** − Inorganic Compounds **B1** − Eutrophication − Phosphorous
B2 − Sedimentation **B*** − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	A
"	"	"	B*
1389	Oil and Gas Field services	Oil, Salt Water	B
"	"	"	C
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	Wastewater pretreatment and/or discharge to a POTW	40CFR 432 and State or federal Storm water pollution prevention regulations
1389	Oil and Gas Field services	Oil, Salt Water	Proper management of production wastes	KAR 28−41, 45, 40 CFR 435
1521	Single−family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28−48, KDHE, KDEM

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Ground Water Multiple Wells Analysis

A − Microbiolgical **B** − Inorganic Compounds
B* − Nitrates **C** − Synthetic Organic Compounds
C* − Pesticides **D** − Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	No	0	0	0	0	0	0
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	Yes	0	0	0	0	0	0
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	Yes	1	1	1	1	1	1
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0
11	Are any non−farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non−farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	Yes	1	1	1	1	1	1
14	Do all farmsteads have a water quality protection plan?	No	1	1	1	1	1	1
15	Is there grazing livestock in Zone B?	No	0	0	0	0	0	0
16	Have all livestock producers implemented water quality protection measures?	Yes	0	0	0	0	0	0
17	Is there livestock confinement in Zone B?	Yes	1	1	1	0	1	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	No	0	0	0	0	0	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	1	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	Yes	0	1	0	1	0	1
26	Do coarse textured soils predominate Zones A, B and C?	No	0	0	0	0	0	0
27	Is an irrigation well located in Zone B or C?	Yes	0	1	1	1	1	1
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	Yes	1	1	1	1	1	1
30	Are there unplugged, abandoned water wells present in Zone C?	Yes	2	1	1	1	1	1
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	No	0	0	0	0	0	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	No	0	0	0	0	0	0
39	Are watershed water quality protection plans in place?	Yes	0	0	0	0	0	0

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Did Not Receive Any Comments			

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**
Diversion Id's: **004, 007, 07**
Status: **Accepted**
Submit Date: **2003−08−22 16:10:21**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **FARMLAND NATIONAL BEEF − LIBERAL**
Assessment Area: **785**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		